LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A system for determining S-parameters of a network, comprising:

an S-parameter calculator that computes the S-parameters of the network based on waveform parameters determined based on single port measurements implemented at each of plural ports of the network, each of the single port measurements being a measurement at one port of the network while each of the other plural ports are not measured, the S-parameter calculator storing the computed S-parameters of the network in memory.

2. (Original) The system of claim 1, the waveform parameters comprise information related to at least one of a transmission and a reflection of a signal provided at the single port.

3. (Original) The system of claim 1, the S-parameter calculator determines reflection coefficients based on the waveform parameters, the S-parameter calculator determining the S-parameters based on the reflection coefficients.

4. (Original) The system of claim 3, the reflection coefficients comprise values functionally related to a transmission and a reflection of a signal provided at the single port.

5. (Original) The system of claim 1, the network is a two-port network comprising first and second ports, the single port measurements comprising measurements implemented at least three of:

the first port while the second port is open;
the first port while the second port is shorted;
the second port while the first port is open; and
the second port while the first port is shorted.

6. (Previously Presented) The system of claim 1, the S-parameter calculator determines reflection coefficients based on waveform parameters, the reflection coefficients comprising at least three of:

a first reflection coefficient of a first port of the network while each of the other plural ports of the network is open;

a second reflection coefficient of the first port while each of the other plural ports is shorted;

a third reflection coefficient of a second port of the network while each of the other plural ports is open; and

a fourth reflection coefficient of the second port while each of the other plural ports is shorted.

7. (Original) The system of claim 1, the S-parameter calculator computes the S-parameters of the network based on a subset of less than all possible reflection coefficients for the network.

8. (Original) The system of claim 1, further comprising a network analyzer for performing the single port measurements.

9. (Original) The system of claim 1, the network is a passive multi-port network.

10. (Currently Amended) A system for determining S-parameters of an n-port network, n being a positive integer, the system comprising:

a reflection coefficient engine that provides a subset of at least n-1 reflection coefficients associated with ports of the multi-port network based on single port measurements performed at each of the ports of the n-port network, each of the single port measurements being a measurement at one port of the n-port network while the other n-1 ports of the n-port network are not measured and are one of open or shorted; and

an S-parameter calculator that computes the S-parameters for the n-port network based on the subset of reflection coefficients, the S-parameter calculator storing the computed S-parameters of the network in memory.

11. (Cancelled)

12. (Previously Presented) The system of claim 10, n equals two, such that the n-port network includes first and second ports, the single port measurements comprising measurements implemented at least three of:

the first port while the second port is open;

the first port while the second port is shorted;

the second port while the first port is open; and

the second port while the first port is shorted.

13. (Original) The system of claim 10, the set of reflection coefficients comprising a subset of less than all possible reflection coefficients for the network.

14. (Cancelled)

15. (Cancelled)

16. (Currently Amended) A system for determining S-parameters of a network, the system comprising:

means for determining at least one of waveform parameters and reflection coefficients based on single port measurements of the network, each of the single port measurements being a measurement at one port of the network while each of the other ports of the network are not measured and are one of open or shorted;

means for computing S-parameters of the network based on the at least one of waveform parameters and reflection coefficients and for storing the computed S-parameters in memory; and

means for selecting a set of the reflection coefficients to be implemented by the determining means.

17. (Original) The system of claim 16, the set of reflection coefficients comprising a subset of less than all possible reflection coefficients for the network.

18. (Currently Amended) A system for determining S-parameters of a network, the system comprising:

means for determining at least one of waveform parameters and reflection coefficients based on single port measurements of the network, each of the single port measurements being a measurement at one port of the network while each of the other ports of the network are not measured and are one of open or shorted; and

means for computing S-parameters of the network based on the at least one of waveform parameters and reflection coefficients and for storing the computed S-parameters in memory;

wherein the computing means comprises means for determining plural sets of the S-parameters for the network based on different respective sets of the reflection coefficients.

19. (Original) The system of claim 18, wherein the computing means comprises means for averaging determined S-parameters for at least some of the plural sets of S-parameters.

20. (Currently Amended) A method for determining S-parameters of a network comprising the steps of:

determining waveform parameters based on single port measurements performed at plural ports of the network, each of the single port measurement being a measurement at one port of the network while the other of the plural ports of the network are not measured and are one of open or shorted; and

determining S-parameters of the network based on the waveform parameters and storing the determined S-parameters in memory.

21. (Original) The method of claim 20, the determination of S-parameters further comprises:

determining reflection coefficients based on the waveform parameters; and

determining the S-parameters based on the reflection coefficients.

22. (Previously Presented) The method of claim 20, further comprising implementing single port measurements at each of the plural ports to provide the single port measurements.

23. (Original) The method of claim 22, the network comprising a two-port network having first and second ports, the measurement of waveform parameters comprising at least three of:

measuring waveform parameters at the first port while the second port is open;

measuring waveform parameters at the first port while the second port is shorted;

measuring waveform parameters at the second port while the first port is open; and

measuring waveform parameters at the second port while the first port is shorted.

24. (Original) The method of claim 20, the network comprising a two-port network having first and second ports, the determination of S-parameters further comprising at least three of:

determining a first reflection coefficient of the first port while the second port is open;

determining a second reflection coefficient of the first port while the second port is shorted;

determining a third reflection coefficient of the second port while the first port is open; and

determining a fourth reflection coefficient of the second port while the first port is shorted.

25. (Original) The method of claim 20, the determination of S-parameters comprises:

selecting equations for determining reflection coefficients;

implementing the selected equations to determine a subset of reflection coefficients for the network based on the waveform parameters; and

determining the S-parameters based on the reflection coefficients.

26. (Original) The method of claim 20, the determination of S-parameters comprises using different S-parameter equations to determine a plurality of values for the same S-parameter and averaging the plurality of values.

27. (Previously Presented) The method of claim 19, the step of determining S-parameters comprises using different S-parameter equations to determine a plurality of values for the same S-parameter and comparing the values to facilitate verifying accuracy of the S-parameters.